Visual Connectedness and Persuasion

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Abstract:

Many advertisers are beginning to pay increasing attention to persuasiveness as a criterion for evaluating their advertising for established brands. A study examined the relationships between persuasiveness and how consumers process the visual content of television commercials. The Ameritest Picture Sort technique was used. It was shown that, while there appeared to be no "objective" differences in the visual complexity of the advertisements, viewers of persuasive ads were able to process more of the visual content of the commercials. This higher rate of information processing is explained by 2 underlying causes: 1. Viewers of highly persuasive commercials tend to have more peak experiences of the visuals. 2. Highly persuasive commercials appear to be characterized by "visual connectedness," or stronger links between the visuals and the advertising.

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Over the years advertising researchers have developed a number of copytesting measures to evaluate television commercials. Two of the most widely used are recall and persuasion scores. For new products, there is evidence (Research Systems Corporation, 1983) that recall, when factored together with media weight, is a good predictor of the awareness that will be generated in the marketplace over time for a new brand. For established brands, however, Blair (1987) has shown that ARS Persuasion(SM*) is a better indicator of effective advertising. In particular, there appears to be a good relationship between "persuasiveness," as measured by the research system's Advertising Research System (ARS) in a laboratory setting, and in-market sales response to split cable media weight tests. By contrast, no strong relationship has been found between recall and sales response for established brands. Many advertisers, therefore, are beginning to pay increasing attention to persuasiveness as a criterion for evaluating their advertising for established brands.

* ARS Persuasion(SM) is a service mark of research systems corporation.

Understanding what makes for a persuasive commercial is, consequently, a major challenge to advertising researchers. In perhaps the most comprehensive study done to date, Stewart and Furse (1986) analyzed the content of over 1,000 TV commercials in order to identify the executional factors associated with persuasive advertising. Not surprisingly, one factor that they confirmed to be important was the presence or absence of a brand-differentiating message. A good strategy for differentiating a product from its competitors, clearly, can be a powerful basis for developing effective advertising. However, specific executional variables which were studied, representing a wide range of creative devices such as product demonstrations, the use of music, humor or lifestyle imagery or time devoted to the product, were found to explain very little, or less than 15 percent, of the variance in ARS Persuasion(SM) scores across these commercials. These results, therefore, confirm what creatives have been saying for a long time--that there are no guaranteed executional formulas for making good advertising.

In discussing the limitations of their study, Stewart and Furse suggest the need for a different focus in advertising research, one that shifts attention "from the effects of specific executional devices to consideration of the information content carried by such devices." Specifically, researchers should be seeking a better understanding of the complex processes at work in consumer perceptions of advertising.

Moles (1968) provides an interesting theoretical framework for such an approach to advertising research in his work on information theory and aesthetic perception. Importantly, he discusses information theory within the context of the physiological limitations of human perceptual systems. Of particular interest here is the importance he assigns to autocorrelation in the perception of the information content of a message.

This paper presents the results of a study of the relationships between persuasiveness and how consumers process the visual content of TV commercials. The study makes use of the picture sort technique developed at Tatham which has previously been found to explain differences in recall scores for TV commercials (Young and Robinson, 1989) While limited in scope, the results shown here are consistent with information-processing models of consumer decision making and point toward general principles that may contribute to a better understanding of television advertising. In particular, we found that the concept of connectedness in the flow of advertising images is important to understanding advertising persuasiveness.

Finally, from a practical standpoint, this study adds a new dimension to our ability to interpret the diagnostic information provided by frame-by-frame recognition measures which can be used by advertisers to aid in the development of more effective advertising.

METHOD

This study was done among twenty-four 30-second television commercials for consumer packaged goods created by the Tatham/RSCG advertising agency. One-fourth of the ads were introductory commercials for new products and three-fourths were for established national brands. All of the commercials were researched prior to airing.

All of the commercials were tested between 1984 and 1989 by ARS, one of the largest copytesting services in the country. This system presents advertising in a laboratory environment and measures persuasiveness by means of a pre-and post-exposure brand-choice technique. Of the commercials in our sample, nine were considered to be high-persuasive ads (scores > 5 among target consumers); six were considered average-persuasive ads (3 <= score <= 5); and nine were considered low-persuasive ads (scores < 3).

All of the commercials were also tested in a second copytesting system, Survey Center's Ameritest(SM). In the Ameritest(SM) respondents are recruited by mall intercept and screened for target-audience membership. Sample sizes vary depending on client needs, but the most common sample size used in these studies was 75 respondents. In this test, qualified respondents individually view the commercial one time and then answer a series of open-and closed-end questions lasting approximately 20 minutes.

The last part of the interview is the Ameritest(SM) Picture Sort (see Young and Robinson, 1987). This procedure uses a deck of still photographs that are taken of a commercial directly from a television screen. For a 30-second commercial, the deck typically consists of 10 to 20 photographs, or as many as are needed to capture discrete images that reflect shifts in scene or movement in the action within a scene. As a "rule-of-thumb," these pictures would include those frames that an art director would render when storyboarding the visual flow of the commercial. So more visually complex commercials require more photographs in the deck.

Respondents are given a randomized deck of these photographs to look through and are asked to sort them into two piles--the pictures they remember seeing and the pictures they do not.

Analysis of the findings begins by plotting the pictures on a scoreboard, where the height of each picture

shows the percentage of respondents recalling that frame and the pictures are plotted from left to right in the sequence in which they actually appear in the commercial (see Figure 1). (Figure 1 omitted) The shape and content of this "visual attention curve" is then analyzed to help us understand how the ad is working.

Finally, the commercials in our sample were grouped into high-, average-, and low-persuasive categories and differences were examined across these groupings.

FINDINGS

In brief, we found that:

* The video recognition measures that are important for understanding persuasiveness are different from those that explain recall.

* In an objective sense, persuasive commercials are neither less nor more visually complex than nonpersuasive commercials.

* But viewers tend to process more of the visual information that is presented in persuasive commercials as compared to nonpersuasive commercials.

* In part, this is because viewers of persuasive commercials tend to have more peak experiences of the visuals.

* And, in part, this is because the flow of images of persuasive commercials tend to be better connected to each other in viewer perceptions.

First of all we note, from Table 1, that both high-and low-persuasive commercials in our sample generated exactly the same recall scores. Both groups had an average recall of 25 percent in the ARS system. This is consistent with ARS findings that recall and ARS Persuasion(SM) are relatively independent of one another.

The fifth column in Table 1 shows the average number of pictures used in the Ameritest(SM) interview decks: 16.3 for high-persuasion ads, 16.6 for average-persuasion ads, 14.9 for low-persuasion ads--statistically, the same number. Importantly, the number of pictures included in a picture-sort deck represents the best judgment of researchers and creatives of the number of frames needed to capture the visual essence of a commercial. As such, this number represents a measure of the visual complexity of a commercial. Visual complexity in this sense, based on the number of cuts or scene changes or the amount of camera movement, is an objective assessment of the ad without reference to how the viewer sees the ad. Consequently, it's a "fact" about commercial content that's analogous to the kind of objective assessment of executional variables that was used in the Stewart and Furse study. And, as in their study, we find that an objective content analysis of commercials yields very little insight into the persuasiveness of the advertising.

The remaining columns of data in Table 1 tell us how consumers processed the video content of the commercials--in particular, how much of the visual experience of a commercial is retained and recognized after a forced viewing of an ad.

We found that, on average, 67 percent of the pictures were recognized from high-persuasive commercials, 63 percent from average-persuasive commercials, and only 47 percent from low-persuasive ads (significant difference at rho < .01). In other words, the more persuasive an ad, the more likely viewers were to process the visual content of that ad to the point of retention.

We note from our previous work that the average number of pictures recognized from an ad was not related to recall. Hence, this finding is consistent with the independence of the recall and persuasiveness measures.

What explains the difference in the amount of information processed by viewers of high-persuasive versus low-persuasive commercials? Our data suggest two explanations. First, high-persuasive commercials tend to have more highly-recognized or "peak" visuals than low-persuasive commercials. Second, the visuals in high-persuasive commercials tend to be better "connected" to each other in viewer perceptions.

Operationally, we define a "peak" visual as a picture which is recognized by 75 percent or more of respondents. We see in Table 1 that 41 percent of the pictures in high-persuasive ads were recognized at peak levels while only 28 percent of the pictures of low-persuasive ads were, a difference which is significant at rho < .05.

"Peak" visuals are important for both recall and persuasion. A key difference between the two measures, however, relates to the content of these "peak" visuals. In our earlier work on recall we showed that explicit product-related information content in the peaks, such as visual representations of the name, the package, or key product attributes or benefits, is highly correlated to recall. This turns out not to be the case for persuasiveness. The content of peak visuals of persuasive ads may be product-related, but it is also just as likely to be other executional content, for example, emotion-laden imagery. We have not yet formulated a clear coding scheme for identifying what would be persuasive content in the attention-curve peaks, however, and additional work needs to be done in this area.

The second factor which explains the higher rate of information processing for high-persuasive ads is what we call "connectedness" in the flow of images. This is very similar to the concept of autocorrelation discussed by Moles. Operationally, we define "connectedness" in terms of the conditional probability that picture n is recognized, given the recognition of the picture "n - 1" which preceded it. What we found was that in persuasive advertising viewer attention to a given picture in the ad increases the probability that the viewer will also pay attention to the picture that follows it.

To see this, we look at Figure 2, which shows two plots of recognition data for the high-and low-persuasive ads. (Table 2 omitted) The X-axis in each graph represents the percentage of respondents who recognized picture "n" in a given photo-sort deck, while the Y-axis represents the percentage of respondents who recognized the preceding picture n-1. That is, each point on these graphs shows the recognition levels for each pair of images--the first and second pictures, the second and third pictures, the third and fourth, and so on. For instance, points in the upper right hand of the graph (top third on both the X and Y axes) represent the case where both picture n and picture n-1 are highly recognized. Points in the lower left-hand corner represent the case where neither picture n nor n-1 were well recognized. Points in the lower right-hand or upper left-hand corners represent the cases where one picture was highly recognized but the other was not.

Visually, we notice from these graphs that for high-persuasion ads more points are concentrated in the upper right part of the graph than is the case for low-persuasion ads where the points are more evenly distributed. For example, in looking at the conditional probabilities shown in parentheses, we note that the conditional probability that a picture n will be recognized by a high percentage of respondents, given that the preceding picture n-1 was recognized by a high percentage of respondents, is 28 percent for high-persuasion ads but only 21 percent for low-persuasion ads.

Table 2 summarizes the distribution of these probabilities across all the cells. For the high-persuasive ads in our study, we find that 93 percent of the time sequential pairs of images in the advertising were recognized at average to high levels. This is higher than the percentage obtained for average-persuasion commercials, 80 percent, and much higher than the percentage obtained for low-persuasive ads, only 69 percent.

On the other side, we see the percentage of the time that one or both images were recognized at low levels: 31 percent for low-persuasive ads, 19 percent for average-persuasion ads, and only 7 percent for high-persuasive ads. What this tells us is that, for low-persuasion commercials, there is a frequent failure to achieve linkage between images that are juxtaposed in an ad. Failure to recognize one or both images in a pair of pictures is clear evidence that viewers are not linking those images together in their consciousness. Conversely, it appears that high-persuasion ads are characterized by high levels of

paired-recognition--and by inference, a high degree of linkage is occurring between images juxtaposed in the flow of the viewer's visual experience of the advertising. This is what we call "visual connectedness."

INTERPRETATION

One of the hypotheses that we had going into this study was that the more simple and direct an ad was, the more likely it was to be persuasive. Simplicity, it turns out, is not the right construct to help us understand this dimension of advertising effectiveness. In this study we found that persuasive advertising was just as likely to make use of complex cinematic treatment as nonpersuasive advertising.

A better construct to use, we think, would be "wholeness." Persuasive advertising is characterized by wholeness in the sense that the commercial parts are more likely to be integrated into a more complete or unified experience by the consumer.

Eisenstein, the film theorist, explained how, through the linking together of separate images, new ideas are created in film--"...we advanced the idea of a principally new qualitative fusion, flowing out of the process of juxtaposition...to create a new quality of the whole from a juxtaposition of the separate parts..." The ultimate value of doing so is "...not so much to show or to present, as to signi, to give meaning..."

From a psychological standpoint Lingle and Ostrom (1981) discuss the role that stored meanings may play in organizing information in a manner that culls irrelevant information from a persuasive communication. Such a mechanism may explain why more of the imagery of persuasive ads is recognized by consumers; they are simply perceived as more relevant they make a connection with the consumer's life.

Associating meanings with products in order to turn products into brands is, after all, the real value of effective advertising. Hence, persuasiveness in advertising seems to be a matter of conveying meanings to the consumer. And to a large extent in television advertising, the meaning of a commercial is conveyed in the visuals.

From a creative standpoint, an important point in our thinking about the video component of how TV commercials work is understanding that the sequence of images the viewer is presented with is ordered in time. Each image follows another because the commercial's creator designed that particular sequence and juxtaposition of images to achieve a particular effect. Once a commercial's images are inside a viewer's mind, however, the original ordering is not necessarily preserved. Consequently, images which the commercial creator intended to be linked in viewer perceptions may not be. As it turns out, persuasive commercials are more likely to preserve these linkages and, by inference, the intended ordering of images in viewer consciousness.

IMPLICATIONS FOR ADVERTISING

The Ameritest(SM) Picture Sort is a diagnostic tool, not an evaluative copytesting measure. As such, it can be used by advertisers to better understand the strengths and weaknesses of commercials in order to produce more persuasive advertising. This study helps us better understand and interpret the data provided by this technique.

This study suggests that if we were to examine the visual-attention curve (see Figure 3) for an individual commercial we should look for the following patterns characteristic of persuasive advertising: (1) the pictures should plot relatively high on the graph, and (2) the overall flow of the curve should be relatively smooth. (Figure 3 omitted) This second point comes out of the construct of connectedness: persuasive commercials are less likely to exhibit the discontinuities or wide swings in frame recognition e.g., high-recognition pictures followed by low-recognition--pictures--that are frequently found in low-persuasive advertising.

LIMITATIONS OF THE STUDY

An obvious point, particularly in a study that speaks of the "wholeness" of persuasive advertising, is that we are dealing here with only one, albeit important, component of TV commercials--namely, visuals. Undoubtedly, copy, music, and, as Stewart and Furse found, the strategic content of the message can make a profound difference on the persuasiveness of an ad. Finding new ways to explore how consumers process those intertwined categories of information remains an important challenge to researchers.

Another limitation of this study is that our sample was small and restricted to the world of consumer packaged goods. Replicating this study on a larger sample of packaged-goods advertising would be a straightforward matter. Generalizing these results beyond packaged goods, e.g., to advertising for Services, is problematic since commonly accepted and validated measures of persuasiveness, such as ARS Persuasion(SM), do not exist for these other categories.

SUMMARY

We have used the Ameritest(SM) Picture Sort to explore the differences between persuasive and nonpersuasive TV commercials. We found that, while there seemed to be no "objective" differences in the visual complexity of the ads, viewers of persuasive ads were able to process more of the visual content of the commercials. This higher rate of information processing is explained by two underlying causes. First, viewers of highly persuasive commercials tend to have more peak experiences of the visuals. Second, highly persuasive commercials seem to be characterized by what we call "visual connectedness"--or stronger linkages between the visuals in the advertising.

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